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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,711	11/21/2003	Giacomo Bolis	003-095	8849

36844 7590 08/23/2005

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EXAMINER

VERDIER, CHRISTOPHER M

ART UNIT PAPER NUMBER

3745

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



Tula

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/717,711	BOLIS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Christopher Verdier	3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7-2-04</u> . | 6) <input type="checkbox"/> Other: _____  |



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Receipt and entry of Applicants' Preliminary Amendment dated November 21, 2003 is acknowledged.

### ***Specification***

The abstract of the disclosure is objected to because it contains the phrases "The present invention" (line 1) and "according to the invention" (line 4) which are implied and should be deleted, because it contains the legal terms "means" (line 5) which should be deleted, and because in the last line, "(Fig. 3a)" should be deleted. Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

Claims 9-10 and 12-13 are objected to because of the following informalities:  
Appropriate correction is required.

In claim 9, line 5, "regular" should be changed to -- regulate --.

Claim 12 should end with a period.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2-7 and 10-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which



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was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 2, lines 3-4 have been amended to claim that the tubular elements are arranged substantially parallel to the direction of flow of the intake air flow. The specification is limited to the tubular elements being arranged essentially parallel to the direction of flow of the intake air flow. Therefore, the addition of the limitation “substantially” adds new matter. Claim 7, lines 3-4 have been amended to claim that the supporting walls are arranged substantially perpendicularly to the direction of flow of the intake air flow. The specification is limited to the supporting walls being arranged essentially perpendicular to the direction of flow of the intake air flow. Therefore, the addition of the limitation “substantially” adds new matter. Claim 10, lines 3-6 have been amended to recite “spraying water with the fogging device into the intake air flow substantially directly upstream of a first compressor stage ... fogging device.” The specification is limited to spraying water with the fogging device into the intake air flow essentially directly upstream. Therefore, the addition of the limitation “substantially” adds new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 8, line 3 recites “nozzles”, while claim 8, lines 4-5 recites “means for spraying water ... via the nozzles”. It is unclear what structure the “means for spraying water”



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encompasses, and the “means for spraying water” appears to be the same element as the nozzles  
33.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Publication 2000-352,320 (figures 1 and 2a-2b). Note the fogging device 2/3 for introducing water, vapor, or both into an intake air flow of a gas turbine 4/5/6, with the fogging device comprising sound-absorbing means comprising plural tubular elements 12 arranged substantially parallel to the direction of flow of the intake air flow, and unnumbered cavities between the tubular elements which are configured and arranged to be sound-absorbing, due to their location in the silencer 2. The tubular elements each have a variable diameter that changes along their length (note the rounded upstream portions of tubular elements 12 in figure 2a). Also disclosed is a method of increasing or regulating the power output of the gas turbine, comprising providing the gas turbine with the fogging device, and operating the fogging device to increase or regulate the power output of the gas turbine, with water being sprayed into the intake air flow substantially directly upstream of a first compressor stage 4.



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Claim 1 is also rejected under 35 U.S.C. 102(b) as being anticipated by Heufler 4,828,175. Note the fogging device 7/11 for introducing water, vapor, or both into an intake air flow of a gas turbine, with the fogging device comprising sound-absorbing means 17, 18, 25, 32, 42. The recitation in claim 1, lines 1-2 of “for introducing water, vapor, or both into an intake air flow of a gas turbine” is a recitation of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). The prior art structure is capable of introducing water, vapor, or both into an intake air flow of a gas turbine.

Claims 1-2, 5, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Lamy 3,710,889. Note the fogging device 6 for introducing water, vapor, or both into an intake air flow of a gas turbine 1, with the fogging device comprising sound-absorbing means comprising plural tubular elements 5 arranged substantially parallel to the direction of flow of the intake air flow. The tubular elements each have a diameter that changes along their length, with the tubular elements each comprising a constriction 9 in a middle region. The recitation in claim 1, lines 1-2 of “for introducing water, vapor, or both into an intake air flow of a gas turbine” is a recitation of intended use. The prior art structure is capable of introducing water, vapor, or both into the intake air flow of a gas turbine.



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 8, as far as it is definite and understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Publication 2000-352,320 in view of Utamura 6,378,284. Japanese Patent Publication 2000-352,320 discloses a fogging device substantially as claimed as set forth above, including nozzles 17 for spraying water, but does not disclose that the water droplet size sprayed from the nozzles is within the range of 10 to 50 microns.



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Utamura (figure 1 and column 2, lines 38-41 and column 4, lines 49-51) shows a gas turbine engine 1, 2, having nozzles 11 that inject water into the intake of the gas turbine engine, with the water droplet size sprayed from the nozzles being 50 microns or less, or 10 microns, for the purpose of providing for power augmentation and thermal efficiency augmentation of the gas turbine engine.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the nozzles of Japanese Patent Publication 2000-352,320 such that the water droplet size sprayed from the nozzles is within the range of 10 to 50 microns, as taught by Utamura, for the purpose of providing for power augmentation and thermal efficiency augmentation of the gas turbine engine.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lamy 3,710,889. Lamy (figure 1) discloses a fogging device substantially as claimed as set forth above, with each tubular element 5 including an inlet side and an outlet side, with the constrictions 9 being configured and arranged such that the elements have substantially the same diameter on the inlet side and on the outlet side. However, Lamy does not disclose that the diameter in the middle constriction region is smaller by 20 to 30 percent.

The recitation of the diameter in the middle constriction region being smaller by 20 to 30 percent of the inlet side and outlet side diameters is a matter of choice in design. The size of the venturi created by the constriction 9 is a result-effective variable known to influence the noise



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reduction. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to select size of the constriction in the middle region to be a specific value, such as smaller by 20 to 30 percent of the inlet side and outlet side diameters, for the purpose of optimizing the noise reduction, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14, respectively, of copending Application No. 10/717,712. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application 10/717,712 recite a silencer comprising means to introduce water into the intake air stream of a



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gas turbine, while the claims of the instant application recite a fogging device for introducing water into an intake air flow of a gas turbine, with the fogging device comprising sound-absorbing means. The claims are therefore considered to not be patentably distinct from each other because the respective claims encompass one another.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### ***Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ritland, Kelley, and Illbruck are cited to show gas turbines with water injectors in the form of nozzles located in the intake air stream.

Jahn is cited as the U.S. equivalent to German Patent 696 07 471 cited by Applicants.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (571) 272-4824. The examiner can normally be reached on Monday-Friday from 10:00-6:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.V.  
August 17, 2005



Christopher Verdier  
Primary Examiner  
Art Unit 3745